

CLAIMS

What is claimed is:

1. A method of communicating between a client  
5 computer process and an agent computer program  
having an embedded web server comprising the  
steps of:
  - a) receiving a request for at least one web page  
10 associated with the agent computer program;  
and
  - b) in response to the request, using the web  
server to provide the requested web page for  
use by the client computer process to  
15 receive information from the agent computer  
program or to issue an instruction to the  
agent computer program.
2. The method of Claim 1 further comprising:  
using the web server to provide the requested web  
20 page for use by the client computer process  
to issue an instruction to the agent  
computer program; and  
modifying the behavior or status of the agent  
computer program based on the instruction.  
25
3. The method of Claim 1 further comprising:  
the client computer process initiating contact  
with the agent computer program by utilizing

-23-

a web address of at least one of web page of  
the agent computer program.

4. The method of Claim 3 further comprising:  
5 the agent computer program initiating contact  
with the client computer process by  
specifying a web address associated with the  
client computer process; and  
agent computer program requesting approval of the  
10 client computer process for a proposed  
action by the agent computer program.
5. The method of Claim 1 wherein the agent computer  
program includes a profile web page for providing  
15 static information associated with the agent  
computer program.
6. The method of Claim 1 wherein the agent computer  
program includes a status web page for providing  
20 dynamic information associated with the agent  
computer program.
7. The method of Claim 1 wherein the agent computer  
program includes an instruction web page for  
25 receiving at least one instruction from the  
client computer process.

8. The method of Claim 1 wherein the method is utilized by dynamic agent computer programs in an automated electronic commerce infrastructure.

5 9. A method of communicating between at least two dynamic agent computer programs comprising the steps of:

10 a) receiving a message;

b) accessing a document type description (DTD) of the message and decoding the message by using the DTD;

15 c) determining an interpreter associated with the message;

d) determining whether the currently loaded interpreter in the agent computer program matches the interpreter required for the current message;

20 e) if no, dynamically load the interpreter needed to interpret the current message; and

f) the loaded interpreter using an associated parser to translate the contents of the message into executable machine code.

10. The method of Claim 9 wherein executable machine code comprises a tree of Java objects that perform the program operations and functions.

11. The method of Claim 9 wherein executable machine code performs the requested action and sends any

requested information to the requesting agent via  
a return message.

12. The method of Claim 9 wherein the method is  
5 utilized by dynamic agent computer programs in an  
automated electronic commerce infrastructure.

13. An agent computer program comprising:

- 10 a) a mechanism for enabling communication between  
the agent computer program and at least one  
other computer process; and
- b) an inter-agent communication mechanism for  
enabling the agent computer program to  
15 communicate with other agents; wherein the  
inter-agent communication mechanism employs  
documents written in a predetermined markup  
language.

14. The agent computer program of claim 13 wherein  
20 the mechanism for enabling communication between  
the agent computer program and at least one other  
computer process includes

a web server embedded in the agent computer  
program for using a predetermined Internet  
25 communication protocol to communicate with the  
computer process; wherein the web server  
processes incoming and outgoing data that is  
formatted according to the predetermined Internet  
communication protocol; and

-26-

at least one web page associated with the agent computer program for use by a computer process to communicate information therewith.

- 5 15. The agent computer program of claim 13 wherein predetermined Internet communication protocol is the HyperText Transport Protocol (HTTP).
- 10 16. The agent computer program of claim 13 wherein the predetermined markup language is the extensive markup language (XML).
- 15 17. The agent computer program of claim 13 further comprising:  
a profile web page for providing static information associated with the agent computer program.
- 20 18. The agent computer program of claim 13 further comprising:  
a status web page for providing dynamic information associated with the agent computer program.
- 25 19. The agent computer program of claim 13 further comprising:  
an instruction web page for receiving at least one instruction from a client computer process.

-27-

20. The agent computer program of claim 13 wherein  
the agent computer program is a dynamic agent  
computer program that is employed in an automated  
5 electronic commerce infrastructure.